

July 14, 2010  
1420 East 6th Ave.  
P.O. Box 200701  
Helena, MT 59620-0701

Environmental Quality Council  
Montana Department of Environmental Quality  
Montana Department of Fish, Wildlife and Parks  
Fisheries Division  
Endangered Species Coordinator  
Native Species Coordinator, Fisheries Office  
Missoula Office

Montana State Library, Helena  
MT Environmental Information Center  
Montana Audubon Council

Montana Wildlife Federation, P.O. Box 1175, Helena, MT 59624

Wayne Hadley, 1016 Eastside Road, Deer Lodge, MT 59722

Montana River Action Network, 304 N 18<sup>th</sup> Ave., Bozeman, MT 59715

North Powell Conservation District, 1002 Hollenback Road, Suite C, Deer Lodge, MT 59722

U.S. Army Corp of Engineers, Helena

U.S. Fish and Wildlife Service, Helena

State Historic Preservation Office, Helena

Big Blackfoot Chapter Trout Unlimited, P.O. Box 1, Ovando, MT 59854

Tom and Sheila Hatch, 1270 Nevada Creek Ranch Road, Helmville, MT 59843

Ladies and Gentlemen:

Please find enclosed an Environmental Assessment prepared for the Future Fisheries Improvement Program. The Program tentatively plans to provide partial funding to a project calling for retrofitting a current irrigation diversion located on Nevada Creek, a tributary to the Blackfoot River, by installing a rock cross vane and a coanda style fish screen. The intent of the project is to eliminate the backwater effects of the existing diversion, improve upstream fish passage and eliminate fish entrainment into the irrigation system. The project site is located on property owned by Tom and Sheila Hatch approximately 5 miles southwest of the community of Helmville in Powell County.

Please submit any comments that you have by 5:00 P.M., August 15, 2010 to the Department of Fish, Wildlife and Parks in Helena at the address listed above. If you have any questions, feel free to contact me at (406) 444-2432. Funding for this project through the Future Fisheries Improvement Program is contingent upon approval being granted by the Fish, Wildlife and Parks Commission. Please note that this draft EA will be considered as final if no substantive comments are received by the deadline listed above.

Sincerely,

Mark Lere, Program Officer  
Habitat Protection Section  
Fisheries Bureau  
Email: mlere@mt.gov

ENVIRONMENTAL ASSESSMENT  
Fisheries Division  
Montana Fish, Wildlife and Parks  
Nevada Creek Diversion Fish Screen Project

General Purpose: The 1995 Montana Legislature enacted statute 87-1-272 through 273 which directs the Department to administer a Future Fisheries Improvement Program. The program involves providing funding for physical projects to restore degraded fish habitat in rivers and lakes for the purpose of improving wild fisheries. The legislature established an earmarked funding account to help accomplish this goal.

The Future Fisheries Improvement Program is proposing to provide partial funding to a project calling for upgrading an existing diversion located on Nevada Creek by retrofitting the structure with a rock cross vane and installing a coanda style fish screen. The intent of the project is to eliminate the backwater effects of the diversion, improve upstream fish passage and eliminate entrainment of fish into the ditch system. The project site is located on Nevada Creek, a tributary to the Blackfoot River, approximately 5 miles southwest of the community of Helmville in Powell County.

I. Location of Project: This project will be conducted on an existing irrigation diversion located on Nevada Creek approximately 5 miles southwest of the community of Helmville within Township 12 North, Range 10 West, Section 10 in Powell County (Attachment 1).

II. Need for the Project: One goal within Montana Fish, Wildlife and Parks six year operations plan for the fisheries program is to “restore and enhance degraded habitats” by implementing habitat restoration projects and administering the Future Fisheries Improvement Program to restore important habitats on public and private lands. This proposed project would help meet this goal.

Nevada Creek is a third order tributary to the Blackfoot River that currently supports low densities of brown trout, rainbow trout, westslope cutthroat trout, and mountain whitefish; as well as a number of non game species of fish. Nevada Creek is listed on the total maximum daily load 303 (d) list for nutrients, siltation, suspended solids and thermal modifications. An unscreened irrigation diversion currently exists on a reach of the stream located downstream of Nevada Creek Reservoir, consisting of a dilapidated rock weir and series of tarps (Attachment 2). The configuration of this diversion causes an upstream backwater effect, resulting in the deposition of a substantial quantity of fine sediment. The diversion also is unscreened and, although not quantified, likely entrains fish into the ditch system. This proposed project would retrofit the existing diversion to eliminate the backwater effect and prevent the loss of fish into the ditch system.

III. Scope of the Project:

The project proposes to upgrade an existing irrigation diversion located on Nevada Creek by

replacing the existing weir with a rock cross vane and installing a coanda style fish screen (Attachment 3). This project is expected to cost \$28,873.00. Of this total, the Future Fisheries Improvement Program (FFIP) would be contributing up to \$10,000.00. The remainder of the funding would come from outside sources and in-kind services:

Contributor	In-kind services	In-kind cash
US Fish & Wildlife Service		\$7,500.00
Landowner	\$2,500.00	
Big Blackfoot Chapter TU	\$600.00	\$2,073.00
Private Foundation		\$6,200.00

IV. Environmental Impact Checklist:

Please see attached checklist.

V. Explanation of Impacts to the Physical Environment

1. Terrestrial and aquatic life and habitats.

Retrofitting an existing diversion on Nevada Creek with a rock cross vane and a fish screen would improve aquatic habitat in the localized area and eliminate the potential for entrainment of fish into the ditch system.

2. Water quantity, quality and distribution.

Short term increases in turbidity would occur during project construction. To minimize turbidity, operation of equipment in the active stream channel would be minimized the extent practicable. A temporary diversion dike would be used to divert flow around the project site during construction. The Department of Environmental Quality will be contacted to determine narrative conditions required to meet short-term water quality standards and protect aquatic biota. A 310 permit (Montana Natural Streambed and Land Preservation Act) will be obtained from the local conservation district and the U.S. Army Corp of Engineers will be contacted for requirements to meet the federal Clean Water Act (404 permit).

3. Geology and soil quality, stability and moisture.

Soils adjacent to the diversion and approximately 650 feet down the ditch canal would be disturbed during the construction, but would be stabilized with re-seeding efforts.

4. Vegetation cover, quantity and quality.

Vegetation cover would be disturbed adjacent to the diversion and approximately 650 feet down the ditch canal during construction. Re-vegetation efforts (re-seeding) would act to

mitigate these disturbances.

5. Aesthetics.

Aesthetics would be adversely impacted during construction due to ground disturbance and the presence of heavy equipment. The long-term effects on aesthetics likely would be negligible since the project involves retrofitting an existing diversion.

7. Unique, endangered, fragile, or limited environmental resources.

Low densities of bull trout are known to reside in the headwaters of Nevada Creek. Although bull trout presence in the vicinity of the project site is likely extremely limited, the installation of the fish screen could potentially prevent entrainment of bull trout into the irrigation system.

9. Historic and archaeological sites

The project site has been previously disturbed by the installation of the existing diversion. A photo of the existing diversion reveals that the concrete structure is relatively new (Attachment 2). As a result, there is a very low likelihood that cultural properties could be impacted. Should cultural materials be inadvertently discovered during the project, the State Historic Preservation Office will be contacted and the site will be investigated.

VI. Explanation of Impacts on the Human Environment.

7. Access to & quality of recreational activities.

Retrofitting the existing diversion would eliminate fish entrainment and improve a migratory corridor for trout. The project has the potential to improve fish populations in Nevada Creek. The project also has the potential to act as a demonstration project that would, in turn, help build local interest in undertaking larger scale restoration efforts on Nevada Creek.

VII. Discussion and Evaluation of Reasonable Alternatives.

1. No Action Alternative

If no funding is provided, the applicant would have to either seek other sources of funding to complete the project or the existing diversion would continue to create a depositional backwater effect, partially impede upstream fish passage and entrain fish residing in Nevada Creek.

2. The Proposed Alternative

The proposed alternative is to provide partial funding through the Future Fisheries Improvement Program toward completion of a diversion retrofit and installation of a fish screen. The funding would enable the applicant to retrofit the existing diversion to eliminate the backwater effect and prevent the loss of fish into the ditch system. This project would continue to provide the water needed for irrigation and, at the same time, may enhance the fishery within this reach of Nevada Creek.

#### VIII. Environmental Assessment Conclusion Section

1. Is an EIS required? No.

We conclude from this review that the proposed activities will have a positive impact on the physical and human environment.

2. Level of public involvement.

The proposed project was reviewed and supported by the public review panel of the Future Fisheries Improvement Program. The proposed project also will be reviewed by the Fish, Wildlife and Parks Commission and funding will be contingent upon their approval. The Environmental Assessment (EA) is being distributed to all individuals and groups listed on the cover letter. The EA will be published on Montana Fish, Wildlife and Parks webpage: [fwp.mt.gov](http://fwp.mt.gov).

3. Duration of comment period?

Public comment will be accepted through 5:00 PM on August 15, 2010.

4. Person responsible for preparing the EA.

Mark Lere, Program Officer  
Habitat Protection Section  
Fisheries Bureau  
Montana Department of Fish, Wildlife and Parks  
1420 East 6th Avenue  
Helena, MT 59620

Telephone: (406) 444-2432  
e-mail: [mlere@mt.gov](mailto:mlere@mt.gov)

**MONTANA DEPARTMENT OF FISH, WILDLIFE AND PARKS**  
1420 E 6th Ave, PO BOX 200701, Helena, MT 59620-0701  
(406) 444-2535

**ENVIRONMENTAL ASSESSMENT**

Project Title Nevada Creek Diversion Fish Screen Project

Division/Bureau Fisheries Division -Future Fisheries Improvement

Description of Project The Future Fisheries Improvement Program is proposing to provide partial funding to a project calling for upgrading an existing diversion located on Nevada Creek by retrofitting the structure with a rock cross vane and installing a coanda style fish screen. The intent of the project is to eliminate backwater effects of the diversion, improve fish passage and eliminate entrainment of fish into the irrigation system.

POTENTIAL IMPACT ON PHYSICAL ENVIRONMENT

	MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ON ATTACHED PAGES
1. Terrestrial & aquatic life and habitats			X			X
2. Water quality, quantity & distribution			X			X
3. Geology & soil quality, stability & moisture			X			X
4. Vegetation cover, quantity & quality			X			X
5. Aesthetics			X			X
6. Air quality				X		
7. Unique, endangered, fragile, or limited environmental resources			X			X
8. Demands on environmental resources of land, water, air & energy				X		
9. Historical & archaeological sites				X		X

# POTENTIAL IMPACTS ON THE HUMAN ENVIRONMENT

	MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ON ATTACHED PAGES
1. Social structures & mores				X		
2. Cultural uniqueness & diversity				X		
3. Local & state tax base & tax revenue				X		
4. Agricultural or industrial production				X		
5. Human health				X		
6. Quantity & distribution of community & personal income				X		
7. Access to & quality of recreational and wilderness activities			X			X
8. Quantity & distribution of employment				X		
9. Distribution & density of population & housing				X		
10. Demands for government services				X		
11. Industrial & commercial activity				X		
12. Demands for energy				X		
13. Locally adopted environmental plans & goals				X		
14. Transportation networks & traffic flows				X		

Other groups or agencies contacted or which may have overlapping jurisdiction North Powell Conservation District, US Fish and Wildlife Service, US Army Corp of Engineers, Montana Department of Environmental Quality, State Historic Preservation Office

Individuals or groups contributing to this EA Ryan Aasheim, Big Blackfoot Chapter Trout Unlimited  
Recommendation concerning preparation of EIS No EIS required.

EA prepared by: Mark Lere

Date: July 9, 2010

### PROJECT VICINITY MAP



ATTACHMENT 1



Photo of irrigation diversion on Nevada Creek

## ATTACHMENT 2



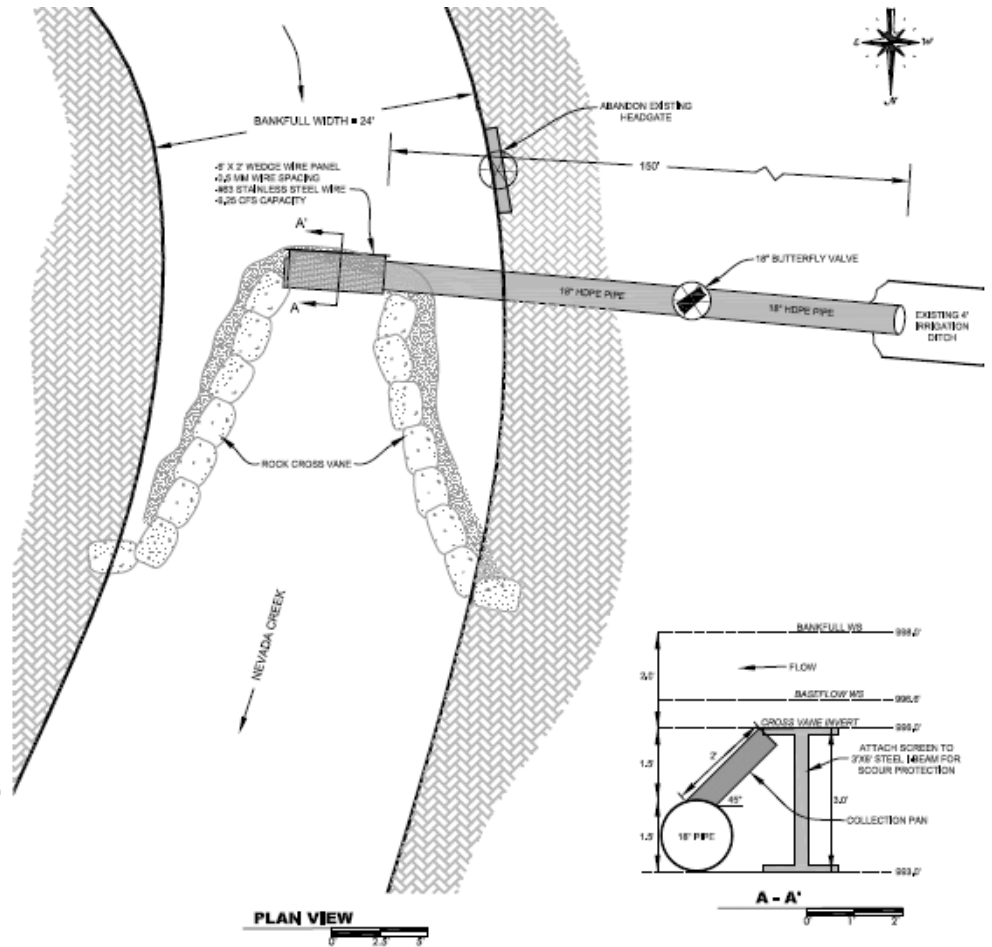
EXAMPLE OF A PIPE-MOUNTED WEDGE WIRE SCREEN



EXAMPLE INSTALLATION

#### SCREEN SPECIFICATIONS

1. The supplier of the wedge wire "Coanda effect" wedge wire screens shall have been in business for a period of a minimum of three years, and have completed at least three similar installations. A minimum of three references, including contact information, shall be furnished.
2. The screen shall be designed to provide fish protection, debris removal, and to operate in a maintenance free condition for extended periods of time. The screen shall be capable of diverting 4.25 cfs from the channel.
3. The screens shall be self-supporting and shall be suitably framed for mounting on the specified plastic pipe. A web crest acceleration plate shall be furnished to assure an even distribution of fluid across the width of the screen without separation of fluid from the screen face.
4. The screen material, all supporting framing, acceleration plate, and fasteners shall be type 304 Stainless Steel. The wedge shaped profile wire screen material shall be type W-63 having 0.5 mm wire spacing. The wires shall be tilted 5 degrees from a plane perpendicular to the supporting rods, all wires shall be welded in a uniform line manner. The screen material shall be free of weld spatter. The screen, pan and receptor pipe shall be as manufactured by Hydroscreen CO. LLC, 2390 Forest Street, Denver Colorado 80207 (phone 303.333.6071) or approved equal. All screens shall be manufactured in a flat condition; screen that is out and straightened after a cylindrical manufacturing process is not acceptable.
5. The screen shall be flat and removable from the pan for replacement and/or maintenance.
6. The screen, pan and pipe will be shipped complete with all fasteners required for field installation.



Plan view of the proposed modification of the irrigation diversion on Nevada Creek

### ATTACHMENT 3